## BHAVANA CK 1BM20CS403 CSE-4A

## **Program 10**

Consider the schema for College Database: STUDENT (USN, SName, Address, Phone, Gender) SEMSEC (SSID, Sem, Sec) CLASS (USN, SSID) SUBJECT (Subcode, Title, Sem, Credits) IAMARKS (USN, Subcode, SSID, Test1, Test2, Test3, FinalIA) Write SQL queries to

- 1. List all the student details studying in fourth semester 'C' section.
- 2. Compute the total number of male and female students in each semester and in each section.
- 3. Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.
- 4. Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = 'Outstanding' If FinalIA = 12 to 16 then CAT = 'Average' If FinalIA < 12 then CAT = 'Weak' Give these details only for 8th semester A, B, and C section students.

CREATE DATABASE COLLEGEDB; USE COLLEGEDB;

CREATE TABLE STUDENT (USN VARCHAR (10),

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SNAME VARCHAR (25),
ADDRESS VARCHAR (25),
PHONE LONG,
GENDER CHAR (1),
PRIMARY KEY (USN));
CREATE TABLE SEMSEC (
SSID VARCHAR (5),
SEM INT,
SEC CHAR (1),
PRIMARY KEY (SSID));
CREATE TABLE CLASS (
USN VARCHAR (10),
SSID VARCHAR (5),
PRIMARY KEY (USN, SSID),
FOREIGN KEY (USN) REFERENCES STUDENT (USN),
FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));
CREATE TABLE SUBJECT (
SUBCODE VARCHAR (8),
TITLE VARCHAR (20),
SEM INT,
CREDITS INT,
PRIMARY KEY (SUBCODE));
CREATE TABLE IAMARKS (
USN VARCHAR (10),
SUBCODE VARCHAR (8),
SSID VARCHAR (5),
TEST1 INT,
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TEST2 INT,
TEST3 INT,
FINALIA INT,
PRIMARY KEY (USN, SUBCODE, SSID),
FOREIGN KEY (USN) REFERENCES STUDENT (USN),
FOREIGN KEY (SUBCODE) REFERENCES SUBJECT
(SUBCODE),
FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));
INSERT INTO STUDENT VALUES
('1RN13CS020','AKSHAY','BELAGAVI', 8877881122,'M');
INSERT INTO STUDENT VALUES
('1RN13CS062', 'SANDHYA', 'BENGALURU',
7722829912,'F');
INSERT INTO STUDENT VALUES
('1RN13CS091','TEESHA','BENGALURU', 7712312312,'F');
INSERT INTO STUDENT VALUES
('1RN13CS066', 'SUPRIYA', 'MANGALURU',
8877881122,'F');
INSERT INTO STUDENT VALUES
('1RN14CS010','ABHAY','BENGALURU', 9900211201,'M');
INSERT INTO STUDENT VALUES
('1RN14CS032', 'BHASKAR', 'BENGALURU',
9923211099,'M');
INSERT INTO STUDENT VALUES
('1RN14CS025','ASMI','BENGALURU', 7894737377,'F');
INSERT INTO STUDENT VALUES
('1RN15CS011','AJAY','TUMKUR', 9845091341,'M');
INSERT INTO STUDENT VALUES
('1RN15CS029','CHITRA','DAVANGERE', 7696772121,'F');
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INSERT INTO STUDENT VALUES
('1RN15CS045','JEEVA','BELLARY', 9944850121,'M');
INSERT INTO STUDENT VALUES
('1RN15CS091','SANTOSH','MANGALURU',
8812332201,'M');
INSERT INTO STUDENT VALUES
('1RN16CS045','ISMAIL','KALBURGI', 9900232201,'M');
INSERT INTO STUDENT VALUES
('1RN16CS088','SAMEERA','SHIMOGA', 9905542212,'F');
INSERT INTO STUDENT VALUES
('1RN16CS122','VINAYAKA','CHIKAMAGALUR',
8800880011,'M');
Select * from STUDENT;
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INSERT INTO SEMSEC VALUES ('CSE8A', 8,'A');
INSERT INTO SEMSEC VALUES ('CSE8B', 8,'B');
INSERT INTO SEMSEC VALUES ('CSE8C', 8,'C');
INSERT INTO SEMSEC VALUES ('CSE7A', 7,'A');
INSERT INTO SEMSEC VALUES ('CSE7B', 7,'B');
INSERT INTO SEMSEC VALUES ('CSE7C', 7,'C');
INSERT INTO SEMSEC VALUES ('CSE6A', 6,'A');
INSERT INTO SEMSEC VALUES ('CSE6B', 6,'B');
INSERT INTO SEMSEC VALUES ('CSE6C', 6,'C');
INSERT INTO SEMSEC VALUES ('CSE5A', 5,'A');
INSERT INTO SEMSEC VALUES ('CSE5B', 5,'B');
INSERT INTO SEMSEC VALUES ('CSE5C', 5,'C');
INSERT INTO SEMSEC VALUES ('CSE4A', 4,'A');
INSERT INTO SEMSEC VALUES ('CSE4B', 4,'B');
INSERT INTO SEMSEC VALUES ('CSE4C', 4,'C');
INSERT INTO SEMSEC VALUES ('CSE3A', 3,'A');
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INSERT INTO SEMSEC VALUES ('CSE3B', 3,'B');
INSERT INTO SEMSEC VALUES ('CSE3C', 3,'C');
INSERT INTO SEMSEC VALUES ('CSE2A', 2,'A');
INSERT INTO SEMSEC VALUES ('CSE2B', 2,'B');
INSERT INTO SEMSEC VALUES ('CSE2C', 2,'C');
INSERT INTO SEMSEC VALUES ('CSE1A', 1,'A');
INSERT INTO SEMSEC VALUES ('CSE1B', 1,'B');
INSERT INTO SEMSEC VALUES ('CSE1B', 1,'B');
Select * from SEMSEC;
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INSERT INTO CLASS VALUES ('1RN13CS020','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS062','CSE8A');
INSERT INTO CLASS VALUES ('1RN13CS066','CSE8B');
INSERT INTO CLASS VALUES ('1RN13CS091','CSE8C');
INSERT INTO CLASS VALUES ('1RN14CS010','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS025','CSE7A');
INSERT INTO CLASS VALUES ('1RN14CS032','CSE7A');
INSERT INTO CLASS VALUES ('1RN15CS011','CSE4A');
INSERT INTO CLASS VALUES ('1RN15CS029','CSE4A');
INSERT INTO CLASS VALUES ('1RN15CS045','CSE4B');
INSERT INTO CLASS VALUES ('1RN15CS091','CSE4C');
INSERT INTO CLASS VALUES ('1RN16CS045','CSE3A');
INSERT INTO CLASS VALUES ('1RN16CS088','CSE3B');
INSERT INTO CLASS VALUES ('1RN16CS122','CSE3C');
Select \* from CLASS;

INSERT INTO SUBJECT VALUES ('10CS81','ACA', 8, 4); INSERT INTO SUBJECT VALUES ('10CS82','SSM', 8, 4); INSERT INTO SUBJECT VALUES ('10CS83','NM', 8, 4); INSERT INTO SUBJECT VALUES ('10CS84','CC', 8, 4); INSERT INTO SUBJECT VALUES ('10CS85','PW', 8, 4);

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INSERT INTO SUBJECT VALUES ('10CS71', 'OOAD', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS72', 'ECS', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS73', 'PTW', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS74','DWDM', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS75','JAVA', 7, 4);
INSERT INTO SUBJECT VALUES ('10CS76', 'SAN', 7, 4);
INSERT INTO SUBJECT VALUES ('15CS51', 'ME', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS52','CN', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS53', 'DBMS', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS54', 'ATC', 5, 4);
INSERT INTO SUBJECT VALUES ('15CS55','JAVA', 5, 3);
INSERT INTO SUBJECT VALUES ('15CS56','AI', 5, 3);
INSERT INTO SUBJECT VALUES ('15CS41', 'M4', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS42','SE', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS43','DAA', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS44', 'MPMC', 4, 4);
INSERT INTO SUBJECT VALUES ('15CS45','OOC', 4, 3);
INSERT INTO SUBJECT VALUES ('15CS46','DC', 4, 3);
INSERT INTO SUBJECT VALUES ('15CS31', 'M3', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS32', 'ADE', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS33', 'DSA', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS34','CO', 3, 4);
INSERT INTO SUBJECT VALUES ('15CS35', 'USP', 3, 3);
INSERT INTO SUBJECT VALUES ('15CS36', 'DMS', 3, 3);
Select * from SUBJECT;
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INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS81','CSE8C', 15, 16, 18);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS82','CSE8C', 12, 19, 14);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS83','CSE8C', 19, 15, 20);

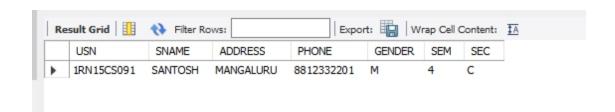
INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS84','CSE8C', 20, 16, 19);

INSERT INTO IAMARKS (USN, SUBCODE, SSID, TEST1, TEST2, TEST3) VALUES ('1RN13CS091','10CS85','CSE8C', 15, 15, 12);

Select \* from IAMARKS;

----- List all the student details studying in fourth semester 'C' section.

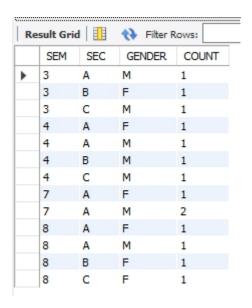
SELECT S.\*, SS.SEM, SS.SEC FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN AND SS.SSID = C.SSID AND SS.SEM = 4 AND SS.SEC='C';



----- Compute the total number of male and female students in each semester and in each section.

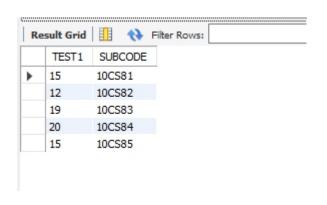
SELECT SS.SEM, SS.SEC, S.GENDER, COUNT(S.GENDER)
AS COUNT

FROM STUDENT S, SEMSEC SS, CLASS C WHERE S.USN = C.USN AND SS.SSID = C.SSID GROUP BY SS.SEM, SS.SEC, S.GENDER ORDER BY SEM;



----- Create a view of Test1 marks of student USN '1BI15CS101' in all subjects.

CREATE VIEW STU\_TEST1\_MARKS\_VIEW
AS
SELECT TEST1, SUBCODE
FROM IAMARKS
WHERE USN = '1RN13CS091';



----- Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = 'Outstanding'
If FinalIA = 12 to 16 then CAT = 'Average'
If FinalIA< 12 then CAT = 'Weak'
Give these details only for 8th semester A, B, and C section students.

